

UNIVERSITY *of* MISSOURI

OFFICE OF THE CHANCELLOR

November 28, 2012

Dear Ms. Rather and Ms. Berger,

Thank you for your passion and commitment to assisting the University of Missouri in transitioning to clean energy. We look forward to collaborating with you.

As I stated in our Climate Action Plan published January 15, 2011, "We at MU are committed to reducing atmospheric carbon in sustainable ways in order to be responsible stewards of our energy resources and of our environment." This includes working towards eliminating our dependence on non-renewable fuel sources.

We propose convening a student-led workshop to establish goals and strategize on process. In order to proceed, we believe it is important for all involved to understand the issues and also to recognize the work the university has accomplished to date.

We appreciate the examples you provided of other universities' initiatives. Campus Facilities staff has relationships with their peers at these universities. Their efforts are indeed commendable. We do believe MU's achievements are comparable, if not better than the examples provided.

Our FY 14 Climate Action Plan, to be released in March 2013, will reveal that we project by 2017 MU's sustainability efforts will result in:

- Power plant renewable fuel mix: **40%**
- Total renewable energy portfolio: **35%**
- Greenhouse gas emissions reduced by (2008 Base): **40%**
- Coal use reduced by (2008 Base): **75%**
- Wind Power percentage of purchased power: **18%**
- Wind Power percentage of campus electric: **7%**

Greenhouse gas emissions reduction of 40% by 2017 without purchasing carbon offsets is among the most aggressive climate action plans, particularly for a large public research institution, submitted by ACUPCC signatories. In addition, an analysis we commissioned from Sightlines shows that MU is among the most energy efficient campuses today (lowest btu/gsf) compared to peer institutions. It is important to recognize our efforts to date and our leadership in this field as we move even further on this quest.



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To answer some of your questions:

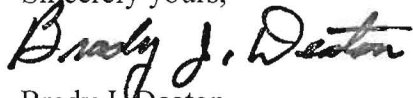
- Our central plant uses combined heat and power technology that is nearly twice as efficient as a plant that only produces electricity.
- During FY12, we generated on-site electricity for the campus using a combination of gas and coal and some purchased power from the grid. As a result, the electric used by campus was 52% coal based. If we were to buy all of the electricity from the grid it would be 81% coal based.
- The campus is currently heated with steam generated from coal and gas boilers in the MU Power Plant. A biomass boiler is under construction that will replace 25% coal use. Even after the new biomass boiler is operational, we cannot generate enough steam without our coal boilers to heat the campus.
- If we were to replace our coal boilers with gas boilers, the gas pipeline infrastructure in Columbia is not adequate to supply these boilers to heat the campus.
- If we did not have a central plant, every campus building would need a gas furnace or boiler for heating, and electricity would be purchased from the grid which is 81% coal based. Individual boilers in buildings would be less reliable than our central plant.
- Another thing to consider is that, historically, coal has had much more price stability compared to gas. MU believes strongly in the triple bottom line of sustainability. For something to be sustainable, it must be socially equitable, environmentally responsible and make sense economically.

Ms. Elbaum is a consultant to the university. She has been working with the University since 2010 on its climate action plan, campus wide LEED initiatives, sustainable building guidelines and STARS submission. She is providing ongoing sustainability consulting services to the university. In that role she will work with the university and students to address campus energy issues and campus coal use.

If Sustain Mizzou, Coal Free Mizzou and other MU student leaders would like to meet with Campus Facilities staff and Ms. Elbaum the week of Jan. 28 or Feb. 4 to begin the collaborative process, please contact MU Associate Vice Chancellor-Facilities Gary Ward at 573-882-2661, and he will schedule the meeting.

Thank you again for your efforts.

Sincerely yours,



Brady J. Deaton
Chancellor

c: President Timothy M. Wolfe
Vice Chancellor Administrative Services Jackie Jones



November 12, 2012

Hon. Brady J. Deaton
Chancellor, University of Missouri
105 Jesse Hall
Columbia, Missouri 65211



Hon. Timothy M. Wolfe
President, University of Missouri System
321 University Hall
Columbia, Missouri 65211

Dear Chancellor Deaton and President Wolfe,

Thank you for taking the time to sit down with Coal Free Mizzou on October 10th of this year. We appreciate your willingness to move forward with the thousands of students calling for the University of Missouri to stop burning coal and transition to clean energy.

As you may know, Coal Free Mizzou is a chapter of the Sierra Student Coalition, the youth branch of the Sierra Club, which is the nation's oldest, largest, and most influential grassroots environmental organization. Coal Free Mizzou works hand-in-hand with the Missouri Chapter of the Sierra Club and the Sierra Club's national Beyond Coal Campaign. Together, we bring the engaged student voice, the broader Missouri perspective, and the power and expertise of the Beyond Coal campaign to the table to work with the Administration to move quickly and responsibly to find the best alternative to coal for the University of Missouri.

The road to achieving a coal-free Mizzou will be complex and will require the input and work of multiple stakeholders. While the administration must provide the required leadership in moving this process forward, Coal Free Mizzou and the Sierra Club are committed to being a meaningful partner in this process.

The stakes could not be any higher, and we cannot emphasize enough that university leadership is essential to making sustainable and effective change. Every year, the University of Missouri's coal-fired power plant emits substantial amounts of the

greenhouse gas CO₂, as well as an array of toxic pollutants including mercury, particulate matter, and sulfur dioxide that contribute to well-documented health problems, including respiratory illnesses, asthma, and even heart attacks. Our evaluation and analysis shows that the plume of harmful pollution from the plant threatens the health of students all over campus – from students living in the dorms to athletes training at our world-class facilities – as well as community residents.

This year, Missouri was devastated by one of the worst droughts in our state's history, with continued increased warming predicted for the future. Intensifying storms, drought, wildfires, extended extreme temperatures, and the extraordinary associated costs are the reality facing MU graduates and are directly correlated to climate change driven by CO₂ and other emissions.

With this backdrop, we agree that the university must move quickly to establish a timeline to transition off of coal. This process has two critical elements: (1) a thorough assessment of the University's energy needs and evaluation of cost-effective ways to meet that need; and (2) participation by critical stakeholders in a credible, goal-driven process to ensure a smart, thoughtful, and workable outcome.

First, a thorough assessment of the University's energy needs and current usage must be completed, followed by a critically important assessment of potential options to replace the portion of Mizzou's energy need that is currently served by the campus coal boilers. Sierra Club has expertise and partners in the area of energy planning and alternative assessment, and believes the University must walk through the following process to achieve a meaningful "beyond coal" energy mix for campus:

1. Assess the actual and projected thermal and electric demand within the Mizzou system that must be met by campus generating capacity.
2. Determine whether Mizzou can currently meet that system demand without coal using its existing biomass and natural gas boilers.
3. If the answer above is no, then determine through comprehensive system analysis how much of the capacity/demand gap can be met by cost-effective energy efficiency measures.
4. If after cost-effective energy efficiency is implemented a capacity/demand gap remains, determine how much of the remaining capacity/demand gap can be met by cost-effective, available renewable energy sources.
5. If a gap still remains, what non-coal options are available to fill in any remaining need?

As you know, we have already asked for information that will help jumpstart this process

and would appreciate the following:

- Campus Energy Need and Details
 - Research, reports, or analysis that reached the conclusion a shift away from coal would financially burden the university and its students
 - The most current information on the actual and projected energy demand (thermal and electric) within the University of Missouri system in Columbia.
 - The most current information on the functional energy production capacity of the campus plant (all fuel and boiler types), including deployed or budgeted energy efficiency measures.
 - Any previous research and reports the university has conducted or commissioned related to campus energy needs and projections.
- Role of Consultant
 - What is Ms. Elbaum's role and what has the University asked her to do?
 - Is she staff or contract consultant?
 - Will she be directed specifically to work on ending coal use on campus?
 - Will she be directed to work on campus energy issues?
 - How will the Administration use Ms. Elbaum's recommendations and how will the results of her work be assessed?
 - Will her recommendations be available to students, faculty, and interested community members?

Sierra Club staff across the country can begin analyzing this information now to better understand Missouri's system, and think through suitable alternatives to coal. We anticipate and appreciate a response, or at the very least, a deadline and plan for getting us a response, no later than November 28th.

Second, the substantive process outlined above and the solutions discussed and decided upon will benefit immensely from a stakeholder process that ensures key campus constituencies are part of the campus' coal-free future. Stakeholder collaboratives take many forms, but key elements include:

- Creation of a committee of key stakeholders that will bring diverse perspectives and an array of problem-solving skills to the table. These stakeholders, in addition to Campus facilities experts and a representative from the University Administration, should include:
 - Students (Especially leaders of student government, campus organizations dealing with environment, public health and business).
 - Faculty members (engineering professors that can solve the problems of this transition, social justice and health professors, and also faculty-student mediators, people that work to solidify and make natural interactions between student leaders and the faculty involved in this process.)
 - Columbia community members and City Council as they live with the impacts of our energy production.

- Mizzou's alumni, who donate money and live in Missouri - supplying funds and technological resources for research and forward progress.
- Local Environmental Groups- Sierra Club, Renew Missouri.
- Authority to make substantive and actionable recommendations to the administration regarding the replacement of coal. Specifically, the collaborative will:
 - Set goals and timelines for the work
 - Meet (at least) once a month in-person with group input for agendas
 - Communicate via email and phone outside meetings to share information
 - Have appropriate timelines and procedures for communication between the committee and the larger community, including stakeholder groups like the Sierra Club, including time to reach out to outside experts, as well as public comment periods on proposed decisions.

Coal Free Mizzou is committed to helping the Administration shape this stakeholder collaborative and we reiterate our willingness to meet with Administration and staff to start developing a plan.

The question the University of Missouri and its broader community of stakeholders is setting out to answer is familiar to many other colleges and universities, as well as city governments, hospitals, and other institutions committed to moving off of coal. We have access to a number of potentially informative examples, including:

- Ball State in Indiana made history with their geothermal system in the spring of 2012 (<http://cms.bsu.edu/About/Geothermal.aspx>).
- Missouri University of Science and Technology. MS&T is replacing their 65-year-old coal plant with a geothermal system to be completed in 2014. In doing this, they will cut carbon and costs (<http://geothermal.mst.edu/>).
- More resources on geothermal leaders: <http://www.nwf.org/Global-Warming/Campus-Solutions/Resources/Reports/Going-Underground-On-Campus.aspx>
- Oklahoma University has a goal of being 100% renewable by 2013 with 44 2.3MW wind-turbines at Spirit Wind Farm built through a purchasing agreement with their local utility (<http://www.ou.edu/sustainability/currentpractices/windpower.html>).
- University of Wisconsin – Oshkosh has the largest solar thermal system in Wisconsin and heats its academic building with the sun. In addition, they use anaerobic digesters for up to 10% of their electricity and heating and geothermal energy. (<http://rs.acupcc.org/progress/549/>)

As an influential and innovative institution, and a leader and educator of generations of citizens from around the state, nation, and the world, the University of Missouri has the

power and ability to create positive change, while setting standards for other institutions across the state and the country. By transitioning off of coal, the university will protect landowners - especially the farmers in southern Illinois devastated by the harvesting of coal from their land. In addition, the University will be protecting community members, students, faculty, and all Missourians whose health is risked by the pollution produced by coal combustion and waste. Implementing true clean energy on campus will yield financial savings in the long run, eventually allowing the university's funds to be spent on more core mission objectives than the shipping and burning of coal. And the university will be fulfilling its leadership obligations and stated objectives to address the significant risks and costs of climate change.

As invested stakeholders in the success of the university and the state, we would like to confirm that the university administration is in agreement and commitment with us that the proposed coal-to-clean-energy transition is the right thing to do on this campus. To ensure continued progress toward ending coal use at the University of Missouri, we anticipate a response to this letter by **November 28th, 2012**. As always, we are more than willing to answer questions and sit down to discuss this matter before November 28th.

Thank you for your time and commitment to this endeavor.

Best regards,



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Lindsey Berger
MO Beyond Coal Organizer, Sierra Student Coalition

Scott Allegrucci
Senior Campaign Representative, Sierra Club Beyond Coal Campaign